

Appl. No. 09/608,976

Amdt. dated December 16, 2003

Reply to Office Action of October 17, 2003

CURRENTLY PENDING CLAIMS

The listing of claims below replaces all prior versions, and listings, of claims:

1 1. (Previously Presented) A method of presenting an execution plan for a
2 query, comprising:

3 determining steps of the query execution plan for a parallel database
4 system;

5 displaying the steps of the query execution plan in a graphical user
6 interface; and

7 depicting parallel execution of steps of the query execution plan in the
8 graphical user interface,

9 wherein depicting the parallel execution of steps comprises displaying
10 plural elements corresponding to concurrently executing plural steps on respective
11 processors of the parallel database system.

1 2. (Previously Presented) The method of claim 1, wherein determining the
2 steps comprises determining steps of the query execution plan for the parallel database
3 system running in a multiprocessing platform having plural processors.

1 3. (Previously Presented) The method of claim 1, wherein determining the
2 steps comprises determining steps of the query execution plan for the parallel database
3 system running in a platform having plural virtual processors to handle access to data in
4 the parallel database system.

1 4. (Previously Presented) The method of claim 1, wherein displaying the
2 plural elements comprises displaying plural icons.

1 5. (Previously Presented) The method of claim 4, wherein the database
2 management system is executable in a platform, and wherein displaying the icons
3 comprises displaying one or more of the icons selected from the group consisting of an
4 icon representing a table, an icon representing an operation performed on a component of

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5 the platform, an icon representing a query statement, and icon representing an operation
6 performed on two or more tables.

1 6. (Original) The method of claim 1, wherein determining the steps of the
2 query execution plan is performed by an optimizer.

1 7. (Previously Presented) The method of claim 6, wherein determining the
2 steps of the query execution plan is performed by the optimizer based on emulated
3 environment data of a target system, the optimizer and emulated environment data
4 present in a test system, the target system comprising the parallel database system.

1 8. (Previously Presented) The method of claim 1, wherein determining the
2 steps of the query execution plan is performed in a test system based on emulated
3 environment data of a target system that is separate from the test system, the target
4 system comprising the parallel database system.

1 9. (Original) The method of claim 1, further comprising displaying explain
2 text of the query execution plan.

1 10. (Original) The method of claim 9, wherein displaying the explain text
2 comprises displaying the explain text in a first screen, and wherein displaying the steps of
3 the query execution plan comprises displaying the steps in a second screen.

1 11. (Original) A method of testing performance of a query, comprising:
2 determining a first execution plan of the query under a first condition;
3 determining a second execution plan of the query under a second
4 condition; and
5 displaying the first and second execution plans concurrently to enable
6 comparison of the execution plans.

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1 12. (Original) The method of claim 11, wherein displaying the first and
2 second execution plans comprises displaying the execution plans in a graphical user
3 interface.

1 13. (Original) The method of claim 11, wherein displaying the first and
2 second execution plans comprises displaying the execution plans in a graphical user
3 interface having a first screen to display the first execution plan and a second screen to
4 display the second execution plan.

1 14. (Original) The method of claim 11, wherein displaying the first and
2 second execution plans comprises displaying a collection of icons to represent steps of
3 each of the execution plans.

1 15. (Original) The method of claim 11, further comprising:
2 determining a third execution plan of the query under a third condition;
3 and
4 displaying the first, second, and third execution plans concurrently to
5 enable comparison of the execution plans.

1 16. (Original) The method of claim 11, wherein determining the first
2 execution plan comprises determining an execution plan for the query in cooperation with
3 a first version of a software module of a parallel database system.

1 17. (Original) The method of claim 16, wherein determining the second
2 execution plan comprises determining an execution plan for the query in cooperation with
3 a second version of the software module of the parallel database system.

1 18. (Original) The method of claim 11, wherein determining the first
2 execution plan comprises determining an execution plan for the query in a system having
3 a first arrangement.

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1 19. (Original) The method of claim 18, wherein determining the second
2 execution plan comprises determining an execution plan for the query in a system having
3 a second arrangement.

1 20. (Original) The method of claim 11, wherein determining the first
2 execution plan comprises determining an execution plan involving a table having a first
3 content.

1 21. (Original) The method of claim 20, wherein determining the second
2 execution plan comprises determining an execution plan involving the table having a
3 second content.

1 22. (Previously Presented) The method of claim 21, wherein the second
2 content contains statistics.

1 23. (Previously Presented) A system comprising:
2 a graphical user interface; and
3 a controller to determine an execution plan of a query based on emulation
4 data that emulates an environment of a target system in which a parallel database system
5 is implemented,
6 the controller to display a representation of the execution plan in the
7 graphical user interface.

1 24. (Original) The system of claim 23, wherein the emulation data comprises
2 cost-related information including a number of nodes in the target system and a number
3 of CPUs in each node.

1 25. (Original) The system of claim 23, wherein the emulation data comprises
2 cost-related information including a number of virtual processors running in the target
3 system.

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1 26. (Original) The system of claim 23, wherein the emulation data comprises
2 cost-related information relating to costs of doing operations in the target system.

1 27. (Original) The system of claim 23, wherein the emulation data represents a
2 target system having a multi-node parallel processing system.

1 28. (Cancelled)

1 29. (Original) The system of claim 23, wherein the emulation data represents a
2 target system running plural virtual processors for handling access to the parallel database
3 system.

1 30. (Previously Presented) An article comprising one or more storage media
2 containing instructions that when executed cause a controller to:
3 determine an execution plan of a query for a parallel database system;
4 display the steps of the execution plan in a graphical user interface; and
5 depict parallel execution of steps of the execution plan in the graphical
6 user interface,
7 wherein depicting the parallel execution of steps comprises displaying
8 plural elements corresponding to concurrently executing plural steps on respective
9 processors of the parallel database system.

1 31. (Previously Presented) The article of claim 30, wherein the instructions
2 when executed cause the controller including an optimizer to determine the execution
3 plan of the query.

1 32. (Previously Presented) The article of claim 30, wherein the instructions
2 when executed cause the controller to receive environment information to emulate a
3 target database system.

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1 33. (Previously Presented) The article of claim 32, wherein the instructions
2 when executed cause the controller to determine the execution plan of the query based on
3 the environment information.

1 34. (Previously Presented) The article of claim 30, wherein the execution plan
2 comprises a first execution plan, wherein the instructions when executed cause the
3 controller to further:
4 determine a second execution plan of the query for the parallel database
5 system;
6 display the steps of the second execution plan concurrently with the steps
7 of the first execution plan in the graphical user interface.

1 35. (Previously Presented) The method of claim 1, wherein displaying the
2 plural elements comprises displaying the plural elements side-by-side to indicate
3 concurrent execution of the respective steps.

1 36. (Previously Presented) The method of claim 35, further comprising
2 displaying other elements in sequence with the plural side-by-side elements to indicate
3 sequential execution of other steps corresponding to the other elements.

1 37. (Previously Presented) The method of claim 11, wherein determining the
2 first execution plan comprises determining the first execution plan in a parallel database
3 system environment, determining the second execution plan comprises determining the
4 second execution plan in the parallel database system environment, and displaying each
5 of the first and second execution plans comprises displaying plural elements
6 corresponding to concurrently executing plural steps on respective processors of the
7 parallel database system environment.

1 38. (Previously Presented) The method of claim 37, wherein displaying the
2 plural elements comprises displaying the plural elements side-by-side to indicate
3 concurrent execution of the respective steps.

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1 39. (Previously Presented) The method of claim 38, further comprising
2 displaying other elements in sequence with the plural side-by-side elements to indicate
3 sequential execution of other steps corresponding to the other elements.

1 40. (Previously Presented) The article of claim 30, wherein displaying the
2 plural elements comprises displaying the plural elements side-by-side to indicate
3 concurrent execution of the respective steps.

1 41. (Previously Presented) The article of claim 40, further comprising
2 displaying other elements in sequence with the plural side-by-side elements to indicate
3 sequential execution of other steps corresponding to the other elements.